

## REMARKS/ARGUMENTS

**Enclosed is a Change of Address for the present application. The Change of Address advises that any further communication in regard to the present application be addressed to the associated with Customer Number 23413.**

**Enclosed herewith is a Petition to Revive an Unintentionally Abandoned Application Under 37 CFR 137(b).**

### **Status of the Application:**

**Status of the Claims:** Claims 1 to 19 and 21 to 27 are pending; claim 20 has been canceled as a non-elected claim with the reservation that a divisional application can be filed for claim 20. Claim 27 is rejected under 35 USC 112, second paragraph, because of the term "substantially" is alleged to be relative. Claims 1, 3-9, 16, 17 and 24 to 26 are rejected under 35 USC 102(b) as being anticipated by Hirose et al., US 4,641,118. Claims 1, 2, 23 and 27 are rejected under 35 USC 102(b) as being anticipated by Kadowaki et al., JP Patent Publication No. 56-98805. Claims 10 to 15 are rejected under 35 USC 103(a) as being unpatentable over Kadowaki et al. Claims 18, 19 and 21 and 22 are rejected as being unpatentable over Kadowaki et al. in view of Pan et al. US 5,847,947.

**Status of the Description:** The Description/Specification is accepted as filed.

**Status of the Abstract:** The Abstract is accepted as filed.

**Status of the Drawings:** The Drawings as filed are objected to under 37 CFR 1.83(a) presumably with regard to claims 12, 14, 15, 17, 18, 19 and 21.

**Status of the priority claim:** The Examiner has acknowledged receipt of a certified copy of French Application No. 00 12222 filed September 26, 2000 under 35 USC 119(a)-(d).

**Status of the Information Disclosure Statement:** The Examiner has acknowledged receipt of the Information Disclosure Statement filed by the applicant.

**Rejection of claims 1, 3-9, 16, 17 and 24 to 26 under 35 USC 102(b)**

Claims 1, 7, 16, 23 and 26 have been amended to be dependent on amended claim 27; claims 2, 3, 4, 5, 6, 8, 9, 17, 24 and 25 have been canceled. Claim 27 was not rejected under 35 USC 102(b). Therefore, pending amended dependent claims 1, 7, 16, 23 and 26 and no longer subject to a rejection under 35 USC 102(b). The applicant respectfully requests that the rejections under 35 USC 102(b) be withdrawn.

**Rejection of claims 10 to 15 under 35 USC 103(a) as being unpatentable over Kadowaki et al.**

Claims 10, 11, 13 and 14 have been amended to be dependent from amended claim 27. Claims 12 and 15 are canceled.

**Rejection of claims 18, 19 and 21 under 35 USC 103(a) as being unpatentable over Kadowaki et al. in view of Pan et al.**

Claims 18 and 21 have been amended to be dependent from amended claim 27. Claim 19 has been canceled.

**Pending Claims**

Claims 1, 7, 10, 11, 13, 14, 16, 18, 21, 22, 23, 26 and 27 remain pending. Claims 1, 7, 10, 11, 13, 14, 16, 18, 21, 22, 23, 26 have been amended to be dependent from amended claim 27. Claim 27 has been amended to recite the following: in the preamble the environment/functional applicability of the subject matter of the disclosed invention; the choice of material for the plates; a clarification of the direction winding for conductors; and a wall separating adjacent spiral grooves, the wall forming a space between adjacent plates for receiving in the space a product having a high thermal conductivity.

The disclosed and claimed invention is directed to a transformer intended for X-ray power voltages that are on the order of 100Kv or more. Transformers and associated circuits for such a utility have a special need for cooling, thermal dissipation, high

electric field intensity and rapid switching. This environment/functional applicability presents implementation problems and implementation solutions that are considerably different than those that may be encountered with other circuit applications. For example, the circuit structure disclosed in the cited Hirose et al. or Kadowaki et al. is believed to be unsuitable for the high-voltage of the present invention. The circuit structure of Hirose et al. is not a transformer but an electromagnet. The substrate in Hirose is made of a thin flexible material and the conductors are formed on the substrate by a photo-etching process. The circuit structure of Kadowaki et al. appears to be for lower voltage applications. While an embodiment of Pan et al. is directed to an X-ray transformer there is no disclosure of the juxtaposed plates, each plate having spiral-wound electric conductors wound in different radial directions nor a spacing between the plates.

Claim 27 further recites a wall separating adjacent spiral grooves on each plate, the wall forming a space between adjacent plates for receiving in the space a product having a high thermal conductivity. Hirose et al. and Kadowaki et al. and Pan et al. each further fail to teach a wall or spacing between adjacent plates as recited in amended claim 27.

The applicant respectfully submits that claim 27 as amended is neither anticipated under 35 USC 102(b) by the cited prior art or unpatentable under 35 USC 103(a) by the cited prior art.

Claims 1, 7, 10, 11, 13, 14, 16, 18, 21, 22, 23 and 26 are each dependent from claim 27 and are considered novel and non-obvious for the same reasons as claim 27.

#### **Rejection of claims 1, 2, 10 to 15, 18, 19, 21 to 23 and 27 over Kadowaki et al.**

The citation to JP 56-098805 A includes a copy of the published JP application and an English language Abstract. The rejection under 35 USC 102(b) or 103(a) is based on structural features that are allegedly disclosed in the JP publication. The applicant objects to the rejection based on the JP publication since it is not apparent that structural features recited in these claims are disclosed in the JP publication. There is no apparent disclosure of at least the following features: a plurality of juxtaposed plates, each plate

having a spiral-wound electric conductor; the conductor spirals being substantially the same; the conductors being wound from outside in on one plate and from inside out on an adjacent juxtaposed plate; and a wall separating adjacent spiral grooves on each plate, the wall forming a space between adjacent plates. The Examiner is requested to provide a full text English language translation of the cited Kadowaki et al. and to substantiate the basis of the rejection – see *Ex parte Jones*, 62 U.S.P.Q.2d 1206 (Bd. App. 2001).

**Rejection of claim 27 is rejected under 35 USC 112, second paragraph.**

Claim 27 is rejected because of the term “substantially” is alleged to be a “relative term”. The applicant respectively disagrees. The term “substantially” is not inherent indefinite and must be considered in relation to the structure disclosed invention and one skilled in the art – see MPEP 2103.05(b) D. In the context of the disclosed and claimed invention the term “substantially” is well understood by one skilled in the art. The term describes the structure of the spiral winding of the conductors in each of the juxtaposed plates. One skilled in the art recognizes, for example, the likelihood of manufacturing mechanical irregularities. The term is not indefinite if it accomplishes substantially the same function with substantially the same result in substantially the same structure. In *Ecolab, Inc. v. Envirochem Inc.*, 264 F.3d 1358, 60 U.S.P.Q.2d 1173 (Fed. Cir. 2001) the court defined “substantially” as having its ordinary meaning of “largely but not wholly that which is specified.” The applicant respectfully requests that the rejection of claim 27 under 35 USC 112, second paragraph, be withdrawn.

**Objection to the drawings under 37 CFR 1.83(a)**

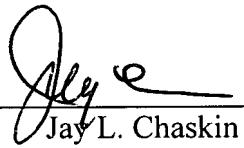
The drawings as filed are objected to under 37 CFR 1.83(a) presumably with regard to claims 12, 14, 15, 17, 18, 19 and 21. Claims 12, 17, 15 and 19 have been canceled. It should be emphatically noted that file wrapper estoppel does not extend to the features per se recited in claims 12, 17 and 19. Claims 12, 17, 15 and 19 are canceled only to the extent of complying with 37 CFR 1.83(a). Claims 14, 18 and 21 remain pending and the applicant respectfully traverses the objection under 37 CFR 1.83(a) in

regard to these claims. The examiner's objection appears to the application of 37 CFR 1.83(a) as an absolute requirement. The applicant believes that 37 CFR 1.83(a) is a relative requirement tempered by what is known by one skilled in the art and the teaching of the disclosed invention. Claim 14 recites that the plate/disk has an oval peripheral shape. Figures 1, 3, 4, and 5 disclose the plate/disk as having a "circular" periphery (see pending claim 13). The term "circular" can be defined as "of or pertaining to a circle" and "shaped like a circle; round" – see The American Heritage Dictionary, second college edition, Houghton Mifflin Company, 1985. A feature that has an "oval" peripheral shape is within the scope of "circular". Claim 18 recites that the insulator of high thermal conductivity that fills the space is in solid form at the temperature of use. This is a functional and not a structural feature and hence is not subject to 37 CFR 1.83(a). Claim 21 recites that adjacent spiral-shaped grooves are separated by an insulator. This structural feature is shown in Figure 2 by wall 24a.

The Description has been amended to correct typographical and grammatical errors and improve antecedent terms and phrases for the features recited in the claims. No new matter is presented.

The Examiner is requested to reconsider the application as amended and to find pending claims 1, 7, 10, 11, 13, 14, 16, 18, 21, 22, 23, 26 and 27 allowable and that a Notice of Allowance be forwarded for this application.

Respectfully submitted,  
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